

an acoustic safing sensor operative to sense acoustic waves propagating through the vehicle structure during a vehicle crash event and provide a safing signal having a characteristic indicative of the sensed crash event;

an actuatable occupant protection device for, when actuated, helping to protect the vehicle occupant during a vehicle crash event; and

a controller which controls actuation of said occupant protection device in response to both said crash signal and said safing signal separately indicating the occurrence of a deployment crash event.

10. (Twice amended) A system for helping to protect a vehicle occupant, said system comprising:

a plurality of crash event sensors, each of said plurality of crash event sensors being operative to sense a different condition of the vehicle and to provide a corresponding sensor signal having a characteristic indicative of the vehicle condition sensed thereby;

an acoustic safing sensor operative to sense acoustic waves propagating through the vehicle structure during a vehicle crash event and to provide a safing signal having a characteristic indicative of the sensed crash event;

an occupant protection device for, when actuated, helping to protect the vehicle occupant during a vehicle crash event; and

an occupant protection device for, when actuated, helping to protect the vehicle occupant during a vehicle crash event; and a controller which controls actuation of said occupant protection device in response to both said acceleration signal and said safing signal separately indicating the occurrence of a deployment crash event.

17. (Twice amended) A method for controlling actuation of an actuatable occupant protection device of a vehicle, said method comprising the steps of:

sensing a vehicle crash condition;
providing a crash event signal having a characteristic indicative of the sensed vehicle crash condition;

sensing acoustic waves that travel through the vehicle structure during the occurrence of the vehicle crash condition;

providing a safing signal in response to the sensed acoustic waves during the vehicle crash condition;

determining the occurrence of a vehicle crash event in response to both the crash event signal and the safing signal separately indicating the occurrence of a vehicle crash condition; and

controlling actuation of an occupant protection device in response to said determination.

22. (Twice amended) A system for helping to protect a vehicle occupant, said system comprising:

means for sensing a vehicle crash condition and providing a crash event signal having a characteristic indicative thereof;

means for sensing acoustic waves that travel through the vehicle structure in response to the occurrence of the vehicle crash condition and providing a safing signal having a characteristic indicative of a vehicle crash event; and

control means for determining the occurrence of a vehicle crash event in response to both the crash event signal and the safing signal separately indicating the occurrence of a deployment crash event and controlling actuation of an occupant protection device in response to the determination.

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